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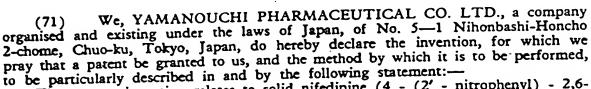
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The present invention relates to solid nifedipine (4 - (2' - nitrophenyl) - 2,6-

dimethyl - 3,5 - dicarmomethoxy - 1,4 - dihydropyridine) compositions.

Nifedipine is a known material which possesses coronary dilator activity and is useful for the treatment of so-called angina pectoris attack. Since it is difficult to foresee the occurrence of angina pectoris attack, the patient is sometimes forced to treat himself when the attack occurs, and hence it is particularly desired that therapeutical substances used for the treatment of angina pectoris attack should be easily administered as a matter of course and exhibit their effect quickly and certainly. However, nifedipine exhibits low bioavailability on oral administration owing to its sparing solubility and is liable to be decomposed by the action of light, and the development of satisfactory pharmaceutical preparations of nifedipine has encountered

Hitherto, as nifedipine preparations for oral administration, there have been known tablets, pills (U.K. Patent No. 1,173,862), and oral-release capsules (U.S. Patent No. 3,784,684). Among these preparations, the tablets and pills are reported to be least effective owing to the very slow absorbability (U.S. Patent No. 3,784,684). The oral-release capsules are prepared by dissolving nifedipine using a solubilizing agent and enclosing the solution in a colored or shading capsule and hence exhibit the effect quickly and show good bioavailability; but the forms of liquid preparation are restricted and the preparation step is very complicated as compared to that for solid preparations. Furthermore, since nifedipine is ordinally inferior in solubility, a large amount of solubilizers or solubilization aids is required for the preparation of such preparations for oral administration; the unit doses of these preparations are therefore inevitably large and in the case of commercially available liquid preparations (oral-release capsules) the weight of one capsule reaches 615 mg. Large tablets and capsules can be made as ellipsoids or oblongs to facilitate the swallowing thereof, but even then they are difficult to swallow if they weigh over 400 mg.

The inventors have discovered that a nifedipine-containing solid composition having the same high bioavailability as the aforesaid liquid preparations, but which is of smaller bulk and more easily administered, can be obtained by compounding

nifedipine with a specific substance or substances. According to this invention, there is provided a solid pharmaceutical composition comprising (1) a mixture of nifedipine and at least one 1st(a) substance selected from polyvinyl pyrrolidone, methyl cellulose, hydroxypropyl cellulose and hydroxypropylmethyl cellulose; or (2) a mixture of nifedipine, at least one 1st(b) substance



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